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# A New Species of *Meconopsis* (Papaveraceae) from Gansu, China

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**ABSTRACT.** A new species of *Meconopsis* Viguiet, *M. biloba* L. Z. An, Shu-Yan Chen & Y. S. Lian (Papaveraceae), from Gansu Province, China, is described and illustrated. The new species is related to *M. quintuplinervia* Regel by several similar characters, including the basal leaf rosettes, a solitary flower borne on the scape, and the blue petals and filaments. It differs from all known *Meconopsis* species in China in its bilobed petals.

**Key words:** China, IUCN Red List, *Meconopsis*, Papaveraceae.

The genus *Meconopsis* Viguiet was established with *M. cambrica* Viguiet in 1814 (Fedde, 1936), and the genus currently includes 49 species (Wu & Chuang, 1980). Only one species is native to western Europe, and the remaining 48 species are distributed in the China-Himalayan region of eastern Asia, with 38 species in China. Western China and its neighboring Himalayan regions represent the center of distribution for the genus (Wu & Chuang, 1980; Wu, 1999). During floristic investigation of Lianhua Shan in Lingtan County of Gansu Province, China, we encountered a new species of *Meconopsis* with striking flowers. We describe this species on the basis of fresh material. The new species has basal leaf rosettes, one scape with a solitary flower, four blue petals, and blue filaments. It stands apart from related species by its petals that are 1/3 to 1/2 bifid at the apex.

***Meconopsis biloba*** L. Z. An, Shu-Yan Chen & Y. S. Lian, sp. nov. TYPE: China. Gansu: Lingtan County, Lianhua Shan, 3050 m, screes and rocky slopes, 24 July 2004, *L. Z. An 2047243* (holotype, LZU). Figure 1.

Species haec *Meconopsidi quintuplinerviae* Regel affinis, a qua (etiam ab omnibus congeneris sinensibus) petalis manifeste bilobis bene differt.

Perennial herb, ca. 30–50 cm tall, covered at base by persistent leaf bases, densely pubescent with

brown and short branched hairs. Leaves entire, forming a basal rosette; petioles 5–9 cm; leaf blades oblong, ovate, rectangular, or rounded-ovate, 3–8 × 1.5–3 cm, blunt at apex, broadly cuneate at base, attenuate along petioles, both surfaces pubescent with yellow or brown, short branched hairs, with 3 to 5 visible longitudinal veins. Scape 1 per rosette, pubescent with brown, branched, and inflexed hairs. Flower solitary, slightly pendant; sepals 2, caducous; petals 4, blue, 3–4 × 2.5–3.5 cm, obovate or subrotund, 1/3 to 1/2 bifid at apex; stamens with blue filaments, 1.5–2 cm; anthers pale yellow, oblong, 1–1.5 mm; ovary subglobose, 5–8 mm, densely pubescent with brown and short branched hairs; style short, 1–1.5 mm; stigma capitate, 4-partite. Capsule formed by 4 carpels. Seeds not seen.

**Distribution and habitat.** The new species is known only from the type specimen collected from Lianhua Shan in Lingtan County of Gansu Province, China, growing at an altitude of 3050 m on screes and rocky slopes.

**IUCN Red List category.** Due to the lack of information regarding the ecology, life history, and population density of the species, as well as the frequency of fire in Lianhua Shan, *Meconopsis biloba* should be classified as Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001).

**Discussion.** This species is affined with *Meconopsis quintuplinervia* in several characters, including the basal leaf rosettes, the solitary flower borne on the scape, and the blue petals and filaments. They differ in the petals, which are entire in *M. quintuplinervia* and bilobed in the new species. This character is extremely unusual in *Meconopsis* and therefore allows *M. biloba* to be easily distinguished from other species in the genus.

The first author visited the original collection site in July 2007, but was unable to collect paratypes because the collection site was inaccessible. There were nine other plants observed at the type locality



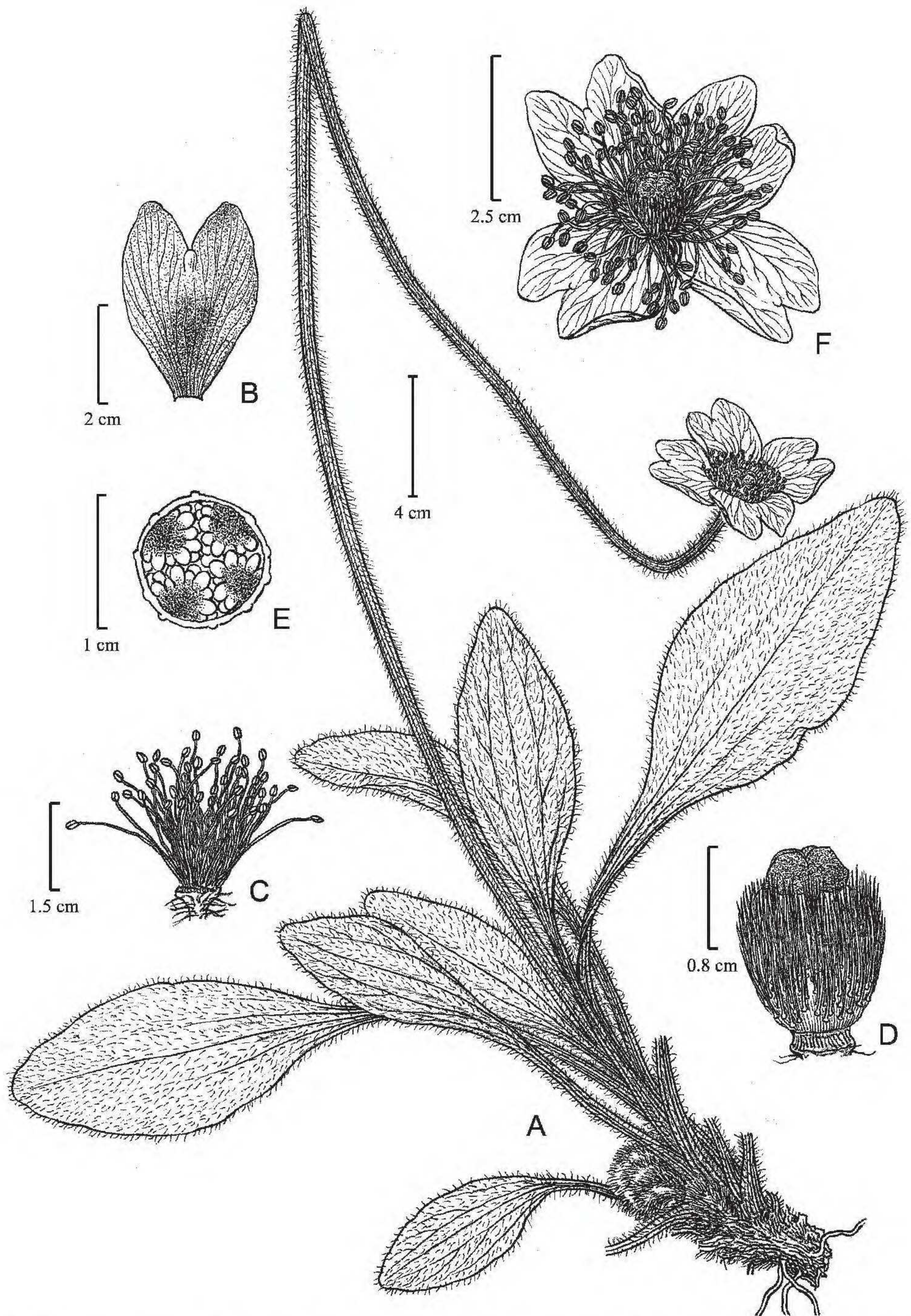


Figure 1. *Meconopsis biloba* L. Z. An, Shu-Yan Chen & Y. S. Lian. —A. Habit. —B. Petal —C. Stamen. —D. Pistil. —E. Part of ovary, cross section. —F. Flower. Drawn from the holotype L. Z. An 2047243 (LZU).

where the holotype was collected. The new species is not under cultivation at LZU.

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Literature Cited

Fedde, F. 1936. Papaveraceae. P. 98 *in* A. Engler & K. Prantl (editors), *Natürlichen Pflanzenfamilien*, Vol. 17b, 2nd ed. Leipzig.

IUCN. 2001. IUCN Red List Categories and Criteria, Version 3.1. Prepared by the IUCN Species Survival Commission. IUCN, Gland, Switzerland, and Cambridge, United Kingdom.

Wu, C. Y. 1999. Papaveraceae. Pp. 7–51 *in* C. Y. Wu (editor), *Flora Reipublicae Popularis Sinicae*, Vol. 32. Science Press, Beijing.

——— & H. Chuang. 1980. A study on the taxonomic system of the genus *Meconopsis*. *Acta Bot. Yunnan.* 24: 371–381.